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A Military Perspective

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THE EXPLOSION of the space shuttle Challenger cost more than the lives of seven courageous Americans. It dealt a stunning blow to the already troubled NASA program and raised serious questions about the Pentagon's ability to maintain its satellite spying network and other vital military operations in space.

By Jay LaMonica

Old NASA hands had feared from the very start that it was a "virtual certainty" that an accident would destroy a shuttle, if not in the testing and development phase, then sometime during the operational lifetime. Unlike the one-of-a-kind Apollo shots that were carefully crafted and worked over for months at a time, the workhorse shuttle was designed as a spaceplane, landing and taking off every few months. In any aircraft program, especially one pushing so hard on the envelope of technology, crashes are an inevitability.

From the very start, NASA had repeatedly requested that additional shuttles be built so replacements would be available. They were turned down by Congress and two administrations which had already watched the shuttle program's cost rocket out of sight. Some long lead-time components of a fifth shuttle have been purchased but it would probably take a few years before another shuttle could be put in orbit.

And what about the shuttle's number one customer, the Pentagon, which has fronted much of the money for the program?

The Air Force, perhaps against its better judgment, had been directed to rely solely on the shuttle for its key space missions. But the Air Force has always had mixed feelings about total reliance on the shuttle, a civilian program in civilian hands, to provide its only access to space, an increasingly important dimension of military endeavors. (The military already spends more on space activities than NASA.)

Even though the Pentagon has the ability to bump other missions for national security payloads, the shaky performance of the shuttle so far and the obvious lack of back-up orbiters were used to justify a program to build ten more heavy-duty expendable rockets to "complement" the shuttle. NASA opposed this purchase, which was reluctantly approved by a Congress worried that the commitment of the shuttle's only steady customer was waning.

Despite this, the Air Force is now firmly betrothed to the shuttle, having built a new generation of satellites to be carried in its spacious cargo hold, which was redesigned to meet the military's specifications.

These new classes of reconnaissance, eavesdropping and communication satellites are larger and more sophisticated than their predecessors. The heavier satellites can do more information processing on board, reducing reliance on vulnerable downlinks. Being bigger, they can carry extra fuel to stay up longer or evade anti-satellite weapons. They can be shielded with heavier armor and may soon even carry defensive weapons of their own, all thanks to the large capacity of the shuttle cargo bay.

The shuttle is the key to the military's major push to seize the high ground of outer space. The Strategic Defense Initiative, investigating a space-based defense against nuclear missiles, has several sensitive experiments booked on the shuttle. The Air Force has been spending billions of dollars to segregate its highly classified shuttle flights from civilian missions. The Air Force has constructed its own secretive version of Cape Kennedy's launch pads at Vandenberg Air Force Base in California, and a secure Mission Control Center in Colorado Springs to bypass the Johnson Flight Control Center in Houston.

When shuttles begin to fly again, the Air Force cargoes will have a high priority. Scheduled for launch this year were two new advanced communications satellites (more than 90 percent of military messages travel through space) and an enormous photo-reconnaissance spy satellite, the KH-12, which is too big for launch by existing boosters. A smaller KH-11 blew up a few minutes after a secret launch at Vandenberg last year atop a conventional rocket.

With the building crescendo of military space missions needed to launch vital satellites and the new demands made by Star Wars research, many believed the Pentagon would have come to dominate shuttle flight in the next few years. Now, with the overall lift capacity suddenly reduced 25 percent, the prospect of virtual military control of the shuttle looms even larger. The Air Force has always wanted its own shuttle, dedicated strictly for military use, or to have more expendable launch vehicles for use at its discretion. The NASA accident may increase its bargaining position; certainly for the latter and perhaps for the former as well.

Jay LaMonica is a journalist specializing in national security issues and an adjunct fellow at Georgetown University's Center for Strategic and International Studies.